1942 Radio-its technique in the elementary classroom.

## TO THE SCHOOL OF THE AIR

The little schoolhouse sits there still
And in the spring the robins come
And perch upon the windowsill,
Inside there is the busy hum
Of children learning A B C's
Outside are nature's harmonies.

The stove is in the selfsame place;
The shelf for lunch pails in the back.
The teacher has a pleasant face.
She puts the books in one neat stack.
And--different from long ago--
She calls her class to radio!

What magic for each lad and lass
To hear the world come rushing in!
Who would not gladly come to class
And long for lessons to begin!
If I could be a child again
I'd go to school to Uncle Ben!

I learned my numbers! I can write!
But in the days of the Three R's
There were no moments of delight
No high communion with the stars!
No flight upon a magic stair!
No joyous schoolhouse of the Air!

---Anne Campbell.

First Reader: John J. Mahoney, Professor of Education
Second Reader: G. Lawrence Rarick, Assistant Professor of Physical Education
Third Reader: W. Linwood Chase, Professor of Education

# RADIO-ITS TECHNIQUE IN THE ELEMENTARY CLASSROOM

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A Thesis

Presented to

the Faculty of the School of Education

Boston University

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In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in Education

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by

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# INTRODUCTION

The American School of the Air has completed thirteen successful years of broadcasting. During these thirteen years many helpful programs have gone on the air; volumes have been written to urge, assure, and guide those who are listening in; and there have been established many proofs that this method of teaching purports learning.

Veterans of the radio teaching field have come to know its value; their classrooms are well equipped for this type of teaching; parents have taken it as a matter of course; students come to accept it as a routine method; and all is well.

We glean helpful bits about teaching, page upon page of its history and growth, photographs of well organized classroom situations, and delightful stories from the volumes which have been written. A beginning teacher of radio needs a compact guide to schedules, procedure, teaching aids, and methods of correlation with regular course of study to accompany the Teacher's Manual and Classroom Guide provided each year by the Columbia Broadcasting System.

That those hungry seekers of information may know the joys of teaching by radio this thesis is prepared.

# CHAPTER I

## PRELIMINARY RESEARCH

Teachers who really hope to gain the most from radio teaching should spend hours of time in research preliminary to using a radio program in their classrooms. Some possible steps of procedure will be given in this chapter. This is prepared for the teacher who is willing to spend ample time in preparation.

Children who have listened to radio broadcasts in the classroom can tell their impressions of this work. One young girl was excited because they were to hear a broadcast at her school that afternoon. When asked the subject of the program she could not answer. She had not been told. Her teacher had lacked the preliminary research, the introduction, and the class work which should have come before to make this broadcast valuable. This child had listened to one program of the kind before, and she remembered that it was something about geography. Not only should there have been preparation, but it is of greater value to follow one program from week to week. One program leads to another, and suggestions are given for activities which help to acquaint the group with the subject matter.

A normal school principal was asked, a few years ago, whether radio classes had been introduced in their training school. He replied that they had not been very successful

there. Further questioning proved that reception was poor on the first two days' trials, and the whole project had been dropped. Although it may seem a waste of time to try to listen when reception is poor, this same school will take children on excursions to distant places, and spend much time in travel. The problem of static is a small issue for the receiver. A few days spent in overcoming this obstacle leads to successful programs. They offer classes materials which a group of educators have spent hours of research and travel to bring to students. The knowledge gained in those short periods is up-to-date, and broader than any one text or classroom library provides. Its full value will be illustrated in other chapters.

"Columbia's American School of the Air-Teacher's Manual and Classroom Guide" is produced by the Columbia Broadcasting System, Department of Education, and may be obtained by teachers in September by writing to

Columbia Broadcasting System, Inc.
485 Madison Avenue
New York City

This manual is the first requisite in any classroom work with radio. There are other school programs. This will be the one referred to throughout this thesis as it is universally used, and was the source for this study.

The interested teacher will read the manual from cover to cover when it arrives. To those who read it anyway this advice seems rather unnecessary, but there are those who fail

to read carefully, and they miss much of its value.

These guides become more helpful each year. Two indices are inserted for use in comparison.

The brochure for 1932-33 had an index as follows:

"INDEX OF SECTIONS



[1]Helen Johnson, The American School of the Air-Teacher's Manual and Classroom Guide (New York: Columbia Broadcasting System, Inc., 1932), p. 12.

The brochure for 1941-42 contains this index:

"INDEX



[2]Department of Education, the Columbia Broadcasting System, School of the Air of the Americas-Teacher's Manual (New York: Columbia Broadcasting System, Inc., 1941), p. 3.

This comparison shows many advances made in this field of work over a period of nine years.

There is merit in every program. Therefore, it is not intended that this discussion be misunderstood, and looked upon by readers, as an attempt at criticism.

Youth and power stories depicted in the 1932 brochure appealed to latent, creative talents. Would-be authors, artists, and poets, inspired in youth by these broadcasts, might find the genius within themselves, and rise to power.

Our comparative program of 1941 and 1942 announces its program with ten basic words. It combines economic geography, occupational guidance, and social studies in one unit, and brings to its youth of today, under twenty-five topics, more than ten times twenty-five outlets for their pent-up ideas about life-time occupations.

Against six books in the 1932 bibliography for parents and teachers, in connection with this program, we find in 1942 from three to six suggestions for activities relative to the topic, an average of five or more books for children with price and date of publication, abundance of free materials available, plus film suggestions for every weekly broadcast.

Elementary science in 1932, with interesting dialogues between George and Uncle Henry, presented a program hard to excel. The diagrams for blackboards would make useful slides for our teaching. Our average teacher is seldom equipped to

locate birds by song, to help a youngster with a complete list of local birds, or to mount, and teach correctly, specimens of insects. These weekly outlines could have covered a term's work in their own field.

In 1942 science programs are combined with geography and history. These programs offer models, and excursions to libraries, factories, and museums. The actual classroom experiment is replaced. Since 1938 the trend has been toward natural science. Teachers miss that bit of chemical experimentation, but in a classroom without equipment we must admit the present trend is more satisfactory, and children are finding answers to their queries. They are happy in their new work. Knowing world neighbors is so much a part of the world interest that it would be difficult to equal this course of study with science materials.

In 1932 Dr. Charles Fleischer interpreted the news of the day each Friday afternoon. The keynote of the series was international peace and understanding.

Significant events of the world news were brought to radio classes this year with stress on the inter-relation of the history and current problems of the Americas. Twenty-five separate lessons were presented. An excellent series of defense problems, forum discussions, and panel discussions were evaluated in the manual, and questions for class preparation were excellent.

Continued comparisons could be made, but this should indicate to readers that a classroom guide is essential, and that one who tries to work without this free booklet is receiving a small portion of the real benefits provided by the Columbia Broadcasting System.

Teachers often admit that they have received manuals, but they have not taken time to read them. Other teachers express a desire to use radio in the classroom, yet they have no knowledge of the printed matter which may be obtained to guide them in this activity, nor any plan of procedure which might encourage them to start this new work.

A beginning teacher of radio needs this preliminary research to gain a general knowledge of the field. The next step should be a second reading, checking those programs which will be useful in her particular grade. Paper clips, clipping together those sections not to be used, will simplify this work. One subject, followed every day that it is broadcast, is advisable for the first year. There is much preparation by teacher and pupils for a series of programs to be of great value, and one should do well what is attempted.

The rural teacher who has tried one program successfully for one year is ready to use the whole manual. Every program may be used to advantage in an eight grade rural school. The grade or grades to benefit from hearing the program should be considered carefully. It is often helpful to list each day's

programs on one sheet for consideration. See Chapter IV, Organizing the School Program.

The teacher of one grade or of a special class will need to submit a plan to her principal. Preparation of this plan is also discussed in detail in Chapter IV, Organizing the School Program.

## CHAPTER II

## CLASSROOM EQUIPMENT

To believe that elaborate equipment is necessary to the schoolroom reception of American School of the Air programs is misleading. This valuable teaching has many times been forfeited because of such a belief.

A fifteen dollar radio served one schoolroom for two years, and few programs were missed. So many people own portable radios now, that the same radio which one uses at home, may, with little effort on the part of the teacher, serve her classroom needs.

Such equipment enables a group to begin its work, and it is doubtful that programs which have been preceded by the proper preparation would ever be discontinued. Because of their known value, every effort would be made to continue.

Bringing a very tall pole from a wood lot to use for better aerial installation helped two boys to realize their resourcefulness. Another boy obtained wire, and studied to know how to install this to the best advantage. When a third child knew how to repair a wall fixture, after a burning cord was discovered, so quickly that little of the program was lost, one more proof of learning to live was seen. That tall pole was set by the boys with the help of a man from the near by filling station. One afternoon, during a heavy shower, it was

thrown to the ground. In their enthusiasm toward their job the children had not neglected to interest their helper in the broadcasts. The people there at the station had been listening to the programs every afternoon. They discovered the problem before the school knew about it, and invited the group to come in at two-thirty to sit at the tables in the booths, and listen to the Hamiltons. Although they took their own writing materials with them, pads and pencils lying on the tables showed how amply the needs were cared for by the interested neighbors.

Seeing a group sitting on a woodpile, with books for desks, listening to a car radio might for the tourist seem little like formal education, but that hour brought reports, from every pupil, which were fully as gratifying as regular daily reports had been.

When sound effects are less clear, and children sit in kindergarten chairs around a register in a family circle, much more is gained than a memory of facts heard. The discussion which follows differs from the formal classroom recitation, and shy members forget self, and speak with self-reliance.

When, in reality, classroom equipment meets all the requirements of a beginners dream, problems of regular schedule interruptions, of the various types found in larger systems, mount higher than the equipment problem ever soared, and one looks longingly back to the hours spent in that small circle around the register.

Receiving equipment is the first essential. Second to that we look to books. Those not furnished by the classroom or the school library may be obtained from other libraries. The local library is the starting place, but a city library membership will help to meet emergencies quickly. For a small fee for membership, and seventy-five cents for mailing charges a neighboring library will send several books for a period of two weeks or more.

Cline Koon's, "The Art of Teaching by Radio" published by the United States Government Printing Office at Washington, D. C., contains suggestions as to materials, information about equipment, and states what equipment he considers adequate.

Newspapers contribute a great deal to the school of the air topic. It is not necessary for the school to subscribe to a newspaper. Every teacher should be a newspaper subscriber. The most tangible and educational papers for use in this field are The Christian Science Monitor and The New York Times. Local papers will contain usable materials. Our educational broadcasts follow current problems, and news editors of educational pages are not slow in following the broadcasts, and supplying materials on the various topics being studied by pupils in their schools. Children are surprised and pleased to discover by themselves that the geography topic is well depicted on a photogravure page of some accessible paper. Whole papers or clippings are often voluntarily brought to the classroom. Com-

petition is good for the soul. If one brings something, another wishes to find something as good as his neighbor's. Teachers, too, may encourage wise clipping and filing of valuable materials. In a later chapter participation of parents and grandparents is discussed.

Maps of all types should be used systematically. Much repetition is necessary before youngsters begin to visualize locations when names are mentioned. As brought out in a later chapter, children having such training are observed to be very alert in locational geography. Nearly every elementary classroom is supplied with maps. Social studies rooms, in departmental schools, take care of this need. If the maps are not of the best, one need not be perturbed because there are many sources of free maps. Product companies sometimes supply maps locating the raising of raw materials, and manufacturing centers, as an advertising measure. While they may not be depended upon for detail in location, they are pictorial, and impress children greatly. National Geographic magazines frequently have excellent maps for school use. These magazines may be borrowed from the local library, or children's parents often give the maps to the children to use in the classroom. A nice globe is to be desired, but one can do nicely without such equipment. Once started on a program materials accumulate rapidly, and should be carefully preserved to remain clean for future use. A thin coat of shellac on a paper map, applied

before it is used, will insure longer life. If only one side of the map is to be used a sheet of cellophane to cover it protects it from finger prints, and mounting insures further protection. Geography books are a well-known source for maps, but some forget to use them while wishing for something better. Newspaper maps and graphs are fine for bulletin boards, and reading of graphs regularly is educational in itself. The magic slate, so inexpensive to buy, offers an excellent opportunity for desk maps. Trace on the top sheet with India ink an outline of the map needed. This map will then be ready for use, throughout the year, whenever that outline is required. On this map, while the teacher or the radio speaker mentions cities, rivers, or countries, the pupil marks with pencil, and may check it for correctness afterward. It is usually most helpful to have maps without names. Dots for cities, and lines for important rivers are beneficial. Boundary lines which are darker serve as a guide to quick locations.

Projectors are not always available, but prove very valuable to the radio taught class. There are slide projectors, lanterns for showing motion films both silent and sound, opaque projectors, or a combination machine for opaque pictures and slides is perfect. There are innumerable uses of slides. A later paragraph treats slides as a separate visual aid. The brochure as described on page 2 contains bibliography of available slides and films for classroom use in correlation with a

particular program. Some are free or the cost consists of mailing charges only, while others are rentals. The opaque projector enables one to show any magazine or post card picture on the walls of the classroom, or on a screen which accompanies the machine. Usually the room must be darkened, and this involves need for shades or Bristol board at the windows to shut out the light.

Slides may be rented in sets, purchased either in sets or as individual slides as one finds a need, or made by the teacher and pupils. Classroom made slides are least expensive, and very valuable. The simplest method of making slides is to draw, type, or trace on cellophane the printed material; graphs, charts, maps in outline, test questions, topics for discussion, word lists, thought questions, or suggestions and directions for working. Radio-Mats from RadiO-Mat Slide Company, New York, may be purchased fifty in a box, and they are ready to use in the typewriter. Celloslides, five hundred for one dollar, may be bought at Teaching Aids Service, Jamaica Plain, Massachusetts. These extra cellophanes may be used between the Radio-Mat frames for extra slides, or used when tracing or drawing with India inks. Place cellophane between two pieces of glass, and bind tightly with Scotch tape. When the slide is correctly placed in the slide carrier of the machine it is well to lift it out and place a black circle on the right upper corner where the thumb holds it, to help you in quickly placing it in the

machine correctly.

Glass may be purchased from

Bausch & Lomb Optical Company
688 St. Paul Street
Rochester, New York

Glassive, an abrasive for glass, is produced by Teaching Aids Service, also. This has directions for making ground glass. On ground glass slides one can write or color, dispensing with the need for cellophane in that particular instance. Experimenting brings daily enlightenment in the use for slides in the classroom. Important snaps, which one has, may be made into slides. If a teacher knows photography a glass with a sensitized surface may be purchased and used. Otherwise commercial companies will make them at comparatively small cost.

Magazines of all kinds suitable for classroom display are useful. Children like to illustrate their papers and booklets. Parents are glad to dispose of used magazines, and these may be used for cutting, or placed on file on the book shelves according to their value.

A regular file for pictures is likely to be the outgrowth of this practice. An elaborate file is not necessary. The lower right hand drawer of the usual teacher's deak is deep, and just the size of regulation folders. These folders may be found in small quantities in a five-and-ten cent store. A small package of stickers will prove valuable, because these folders may then be labeled, and the labels changed when pres-

ent materials are no longer useful. It is fine for each child to have at least one folder of personal materials, papers, clippings, pictures, and maps. A small card file is most helpful to record items which may be easily and quickly found when needed.

"Mailing materials", at hand, will bring to a classroom valuable supplies. A teacher naturally neglects to send for free materials if a postal card or stamp are not within reach. A penny postal card is inexpensive and easily posted. When reading teacher's magazines, offers of free materials are discovered, and if not ordered at the moment are seldom remembered.

A resourceful, experienced teacher will have some or all of this material. That the new teacher may begin to build her supplies, an experienced teacher may find something new to make her equipment more modern, or that some well-equipped teacher may read this and remember some valuable aid, already owned but hidden away, this chapter is provided.

## CHAPTER III

## MAKING ADJUSTMENTS

There are numerous difficulties which must be adjusted as the work progresses. Every new idea meets with criticism. When a person finds herself without criticism it would be well to account for her recent procedures, and see whether she has launched anything worth-while. Calm assurance that work well-done reaps its reward, an honest belief, and effort toward making the new method a success make a teacher self-confident, self-reliant, and a benefit to the community.

### MEETING PARENTS CRITICISMS

Parents are quick to criticize any new methods used by teachers. The project method, the unit method, freedom in the classroom, the school excursion, all met with disapproval from parents. Why? Because they knew nothing about these methods. They had to be educated to the new ways of the school. When they were in school the group never marched out of the classroom for an afternoon visit at the zoo, the corner store, a museum, the library, or some manufacturing center. Just as these "new-fangled" ideas were so hard to understand, so is teaching by radio.

This much used classroom aid is being accepted generally now, but it would still be wise for a teacher introducing its

use for the first time to make definite plans in orienting parents at the same time that she tries to introduce it favorably for the children of her classroom. Parents seldom fail to rise to meet the problem when a question is circulated for community discussion. Say to the pupils, "You could ask your mother and father at dinner to-night if they have something to add to what you have heard today about the fiords of Norway."

They may have relatives who have sent post cards depicting scenes of fiords. Phyllis, whose mother takes the National Geographic magazines may find pictures in a recent copy. If good care is taken of borrowed materials many fine articles may be brought for a few days for boys and girls to see. This includes parents in the classroom discussion. Telephone calls will follow because Phyllis forgot which Geographic was needed, or because sister has a book which she has been studying that has a lot about Norway, and Phyllis thinks it would be nice to bring to school. Another mother would like to know whether there would be helpful pictures and articles in current National Geographic magazines as she has never subscribed to it, and didn't realize that it contained so many articles and illustrations. "How can she become a member of the Society, and be a subscriber?"

Nancy's mother was once in a play, and she has a fine costume which Nancy could wear for one day, the day of the program perhaps, to help make the atmosphere of the classroom

more typical of Norway. All of these things actually happened in one classroom and community, because of a thought question which was sent out to the people.

## SUPERINTENDENT'S INQUIRIES

Superintendents who have not had teachers teaching by radio are often harder to interest than parents are. They have more to consider. It is their problem to have the course of study covered. It is their problem that children measure up in intelligence, and in achievement tests. It is their problem to see that teachers teach in the best functional way each day. Time wasted can never be regained.

This is not a serious problem for the teacher who is well-equipped. Chapter IV, Organizing the School Program, will show how a teacher may have materials ready to show to her superintendent. She may wait until he comes to inquire, but the wise teacher will consult her superintendent first, about introducing a new method which will occupy so much of the school time in a well-organized teaching program. All of her research, program organization, arrangement for proper equipment, and proof of the value of the broadcast, with its educators steeped with information too vast for any one teacher to have prepared to introduce in one fifteen minutes of classroom teaching, are winning points. The important fact that this is true of each day's program to be broadcast, and the assurance that the preparation is going to be as adequate each day on her part, will do much to-

ward helping him to understand her plan. She must not be disturbed when told to try only one to let him see how it works out. He may say that one each week is enough. It is up to her to show him the value of that one. He will check again. If he should forget she should take the result to him, and have her presentation or questions well formulated. He is a busy man, and cannot afford to spend a great deal of time listening to lengthy explanations. This considered, she should not hesitate to advance her ideas. It is his place to know what she is doing, and he will respect her for discussing this with him before going ahead, and as he sees it, blundering blindly into something she knows too little about.

American School of the Air programs were carried on successfully for three years in one rural school. The teacher then moved to another community only three miles away, and in the same town, and started teaching by radio in that school. She was so used to this teaching, and her superintendent sanctioned it so heartily, that she failed to remember to educate these new parents. Fewer ideas had been used here. Parents had less to do with, and their opportunities had been meagre. Such pandemonium arose that she nearly had to give up her program. The superintendent was consulted. The need for advancing slowly was seen. The programs were cut to one each week. Thought questions were sent out, and this time it was the superintendent who insisted that the work be carried to the

finish if possible. This process was successful, and one of the exhibits described in a later chapter was a result of the work in that school.

## PUPIL INTEREST

Pupils need consideration in making new adjustments. Nearly all pupils respond quickly to new methods of procedure. It makes their work more interesting. For some, a careful introduction is necessary, or they are apt to accept this new radio program as a chance for play, a way to get out of studying, or as an opportunity for poor conduct. Beware of keen interest at the start. It takes a new method to sharpen the interest of the entire classroom, but it takes a competent teacher to hold that interest at high level. Adequate preparation, a confidence in her program, and her knowledge of the work covered, plus some definite plan in which the pupil may participate and contribute are essential. As shown in Chapter VI, How to Make the Most of This Tool, and in Chapter VIII, Some Observations, adjustments are easily made, work proves interesting and broadening, and pupils have an opportunity for individual expression and advance in proportion to their own ability under such guidance.

## CHAPTER IV

## ORGANIZING THE SCHOOL PROGRAM

A tentative school program should be organized before the broadcasts begin. This is one of the securities a teacher has when she visits her superintendent. He will ask early in the conversation how this is going to effect the whole school plan.

### THE RURAL PROGRAM

To have a broadcasting hour free from all interruptions is the first problem of organization. For the rural teacher this presents less difficulty than to other teachers. Schedules are considered for Eastern time broadcasts. There have been two different hours for the broadcast. A program of work for each is suggested. The hours were 2:30 to 3:00 o'clock P. M., and 9:15 to 9:45 A. M. The rural schedule including the morning broadcast appears on page 23. Provision for afternoon reception is made in the schedule on page 24. Knowing thus what one must do in her own school with her own program, outside interruptions should be considered. The rural schedule is practically finished with this preparation, because the music teacher is the only regular visitor. If approached early in the year this teacher can arrange her visit at a favorable hour. A superintendent and other visitors will usually prefer to listen in, and will not object to this regular part of the day's

RURAL SCHOOL PROGRAM

A. M.

| Subjects | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Reading | Primary 1-3 | Primary 1-3 | Primary 1-3 | Primary 1-3 | Primary 1-3 |
| Arith. | Elem. 3&4 | Upper 7 | Elem. 5&6 | Upper 8 | Elem. 3-6 |
| School of the Air | Ameri-cans at work | Music of the Amer icas | New Hor-izons | Tales from Far and Near | This Living World |
| Spell. and Pen. | All | All | All | All | All |
| RECESS | | | | | |
| Arith. | Upper 8 | Elem. 3&4 | Upper 7 | Elem. 5&6 | Upper 8 |
| Social Studies | Primary _____ | 5-8 | Primary _____ | 5-8 | Primary _____ |

P. M.

| Subjects | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Reading | 1&2 | 1&2 | 1&2 | 1&2 | 1&2 |
| English | Comp. 5&6 | Grammar 7&8 | English 2-4 | English 5-8 | English 2-4 |
| Music | All (2 div.) | _____ | All | All | All |
| RECESS | | | | | |
| Reading | Read. 3&4 | Lit. 5&6 | Read. 3&4 | Lit. 7&8 | (alt.) Read. 5&6-7&8 |
| Hygiene | 3,4&5 | 6,7&8 | Current Events | 6,7&8 | 3,4&5 |

FIGURE 1

RURAL SCHOOL PROGRAM

A. M.

| Subjects | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Reading | Primary 1-3 | Primary 1-3 | Primary 1-3 | Primary 1-3 | Primary 1-3 |
| Arith. | Elem. 3&4 | Upper 7 | Elem. 5&6 | Upper 8 | Elem. 3-6 |
| Spell. and Pen. | All | All | All | All | All |
| RECESS | | | | | |
| Reading | Read. 3&4 | Lit. 5&6 | Read. 4&3 | Lit. 7&8 | (alt.) Read. 5&6-7&8 |
| Social Studies | Primary | 5-8 | Primary | 5-8 | Primary |

P. M.

| Subjects | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Reading &Number | 1&2 | 1&2 | 1&2 | 1&2 | 1&2 |
| English | Comp. 5&6 | Grammar 7&8 | English 2-4 | English 5-8 | English 2-4 |
| Music | All | _____ | All | All | All |
| RECESS | | | | | |
| School of the Air | Ameri-cans at work | Music of the Amer icas | New Hor-izons | Tales from Far and Near | This Living World |
| Hygiene | 3,4&5 | 6,7&8 | Current Events | 6,7&8 | 3,4&5 |

FIGURE 2

work.

The block program for the rural school, as seen in figures 1 and 2, is the most satisfactory type, where so many grades and classes are to be taught.

Provision for primary reading twice each day is necessary. The first period of each session usually proves to be the best time. Then these youngsters, who can do so little without directions, are given seat work that can be supervised sufficiently while other groups are at work. During this time, the elementary and upper grades are working on arithmetic assignments of the previous day.

The second block is best used for arithmetic while the problems of these working groups are ready. The rural teacher will find it difficult to have a class for each grade each day, even when classes are combined. The wise teacher will check her texts to know which day a new step in arithmetic occurs. On other days a few moments to speak of errors noted in the last set of papers is sufficient. By alternating in this way a longer period may be spent with the group needing attention, and after a lesson of this length children can do several assignments alone.

The third block is open for the American School of the Air when the program comes in the morning. On this schedule, the block for the subject of the School of the Air is left open for some other work. For example, Americans at Work, the

Monday broadcast, is definitely a social studies program, so the last morning period may be devoted to primary work. There will be research work, or the radio group will like extra time to plan their problem representative of that broadcast. Library, reading, English, or literature periods may be used for further school of the air study according to the correlation plan.

The explanation of the second and third blocks clarifies the reading of the remaining schedule.

The second rural program, which is found on page 24, is the block plan, also. This provides for American School of the Air in the afternoon.

In rural schools, teachers often find it possible to have primary children on the playground through the broadcast period. Grades three and four, if excused for this time, return for more school work, but the primary youngsters could complete their afternoon work before recess.

## THE ONE GRADE PROGRAM

The one grade schedule is easily followed. The two sample programs for one grade appear in figures 3 and 4. An important provision in this arrangement is the block for the regular school subject which is identical with that of the school of the air. Another subject is substituted on that day. For instance, New Horizons is the topic for Wednesday. It is a social studies series, therefore current events may be studied during the

regular Wednesday social studies period. This Living World is a current events program, thus, the social studies period, if devoted to library work, would be less repetitive, and insure greater interest than a double period devoted to the same subject.

If the home room has equipment, and pupils remain in this room for the listening program, again the music teacher is one who must be consulted early about her work with this group. The arrangement will be more difficult than that of the rural teacher, because the music instructor will want to come to this room while she is in the building, and this schedule may be difficult to arrange without inconvenience to her, particularly if several rooms are hearing the same program. This problem does not often arise, because the program to which these children listen is suitable for one group, or not more than two groups would benefit by it. In this case the music teacher can meet another group during the radio hour.

When several grades are participating there is the auditorium problem. This is difficult for the morning broadcast, because chapel services often over-lap the radio hour. If radio acoustics for auditorium use, afford better reception, then this is not a problem. The P. M. broadcast from a western station may be clearly brought to the listeners. Auditorium listening proves the greatest discipline problem for radio schools. Each grade is grouped with children from another

ONE GRADE PROGRAM

A. M.

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | Arith. | Arith. | Arith. | Arith. | Arith. |
| 2 School of Air | Ameri-cans at work | Music of the Amer icas | New Hor-izons | Tales from Far and Near | This Living World |
| 3 | English | Pen. | Music | English | English |
| 4 | Current Events | Social Studies | Current Events | Social Studies | Library |

P. M.

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | Read. | Read. | Library | Read. | Read. |
| 2 | Spell. | Spell. | Spell. | Spell. | Music |
| 3 | Social Studies | Grammar | Social Studies | Grammar | Social Studies |
| 4 | Gym. | Lit. | Lit. | Gym. | Hygiene |

FIGURE 3

ONE GRADE PROGRAM

A. M.

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | Arith. | Arith. | Arith. | Arith. | Arith. |
| 2 | Social Studies | Grammar | Social Studies | Grammar | Social Studies |
| 3 | English | Pen. | Music | English | English |
| 4 | Current Events | Social Studies | Current Events | Social Studies | Library |

P. M.

| Period | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 1 | Read. | Read. | Library | Read. | Read. |
| 2 | Spell. | Spell. | Spell. | Spell. | Music |
| 3 Radio | Ameri-cans at work | Music of the Amer icas | New Hor-izons | Tales from Far and Near | This Living World |
| 4 | Gym. | Lit. | Lit. | Gym. | Hygiene |

FIGURE 4

classroom. Interests vary, pupils find it harder to concentrate during interludes the little hints which would put one group on its toes would disturb others, because each teacher conducts her class differently. Moving from one room to another brings pupils to their seats only a few seconds before the program begins. The excitement of moving, seeing a friend along the way, getting thoughts far from work, causes inattention for several minutes before the child's mind is settled on the lesson. In this time so much has happened, that it is difficult to understand the subject matter, and the child does one of three things: (1) merely misses the first of the broadcast; (2) loses much of the next five minutes because of trying to pick up the thread of the story; (3) or settles down to play or dream until it is over, because he thinks it is of little use to try to understand at this late moment. The section on activities in Chapter VIII, "How to Make the Most of This Tool", may contain valuable information for the teacher facing this problem. Help the child create an interest in hobbies, activities, model making, or excursions; and he will become interested at once in every program, look with disgust toward a noisy neighbor, and aid in quieting this unsettled atmosphere. Nothing quiets a room so quickly as a rebuke from a fellow listener.

## DEPARTMENTAL SCHOOLS

In a departmental school schedules should be submitted early to the principal of the building. To arrange such a

program the brochure obtained should be studied carefully by each teacher, and a decision reached as to which program fits her course of study, grade level, and the interest of her children. It is advisable for one teacher to take the conclusions of all teachers, and arrange a definite schedule for the building before troubling the principal with the matter. Figures 5, 6, 7 and 8, are information sheets which were prepared for the principal of a Vocational school for girls. A remedial teacher, having an individual pupil for instruction at the time of the broadcast, made provision for that youngster to arrive at another hour, and the child's regular program was consulted, so that this interruption was really possible without hindrance to her progress.

A schedule of dates for programs enables a principal to see at a glance when a radio class is in session. Omission of a date indicates radio holidays which may not coincide with a school calendar.

Figures 6, 7 and 8, list radio subjects together with dates. These proved convenient to clip to a daily schedule for a reference to the topic for any particular day.

A date schedule, and listed daily topics to accompany her copy of the Teacher's Manual will simplify a principal's perusal of the proposed plan of the teaching staff.

Time: 9:15-9:45

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|
| Geography | Music-Folk Art | Geog. Hist. Science | Literature | Current Events |
| Oct. 7 Elem | Oct. 8 | Oct. 9Rem. | Oct. 10El. | Oct. 11 El. |
| " 14 6th | " 15 | " 16Elem | Oct. 17 " | " 18 |
| " 21 " | " 22 | " 23 6th | " 24 " | " 25 |
| " 28 " | " 29 | " 30 " | " 31 " | Nov. 1 |
| Nov. 4 " | Nov.12 | Nov. 6 " | Nov. 7 " | " 8 |
| " 18 " | " 19 | " 13 " | " 14 | " 15 |
| " 25 " | " 26 | " 20 " | " 28 " | " 29 |
| Dec. 2 " | 3 | " 27 " | Dec. 5 " | Dec. 6 |
| " 9 " | Dec.10 | Dec. 4 " | | " 13 |
| " 16Home | " 17 | " 11 " | " 12 " | " 20 |
| Jan. 6 Ec. | Jan. 7 | " 18 " | " 19 " | |
| " 13 " | " 14 | Jan. 8 " | Jan. 9 | Jan. 10 |
| " 20 " | " 21 | " 15 " | " 16 " | " 17 |
| " 27 " | " 28 | " 22 " | " 23 " | " 24 |
| Feb. 3 " | Feb. 4 | " 29 " | " 30 " | " 31 |
| " 10 " | " 11 | Feb. 5 " | Feb. 6 | Feb. 7 |
| " 17 " | " 18 | " 19 " | " 13 " | " 14 |
| " 24 All | " 28 | " 26 " | " 20 " | " 21 |
| Mar. 3 Rem. | Mar. 4 | Mar. 5 " | " 27 " | " 28 |
| " 10 " | " 11 | " 12 " | Mar. 6 " | Mar. 7 |
| " 17 " | " 18 | " 19 " | " 13 " | " 14 |
| " 24 " | " 25 | " 28 " | " 20 " | " 21 |
| " 31 " | Apr. 1 | Apr. 2 " | " 27 " | " 28 |
| Apr. 7 " | " 8 | " 9 " | Apr. 3 " | Apr. 4 |
| " 14 " | " 15 | " 16 " | " 17 " | " 18 |
| " 21 " | " 22 | " 23 " | " 24 " | " 25 |
| " 32 | | | Underscored for Jr. high | 7th and up. |

FIGURE 5

RADIO CLASS SCHEDULE

Time: 9:15-9:45

| | | |
|---|---|---|
| October | 21 | "Furs" |
| November | 4 | "Oil" |
| November | 18 | "Hemp and Sisal" |
| November | 25 | "Rubber" |
| December | 2 | "Cotton" |
| December | 9 | "Newsprint" |
| December | 16 | "Coffee" |
| January | 6 | "Nuts" |
| January | 13 | "Bananas" |
| January | 20 | "Grain" |
| January | 27 | "Sugar" |
| February | 3 | "Citrus Fruit" |
| February | 10 | "Cocoa" |
| February | 17 | "Cattle" |
| February | 24 | "Gold and Silver" |
| March | 3 | "Coal" |
| March | 10 | "Iron" |
| March | 17 | "Precious Stones" |
| March | 24 | "Tin" |
| March | 31 | "Copper" |
| April | 7 | "Nitrates" |
| April | 14 | "Aluminum" |
| April | 21 | "Pan-America" |

FIGURE 6

MONDAY PROGRAMS

Time: 9:15-9:45

| | | |
|---|---|---|
| October | 23..... | "Blessings from the Deep" |
| October | 30..... | "Passage to Cathay" |
| November | 6..... | "Man-Made Islands of the Aztecs" |
| November | 13..... | "Incas Over the Andes" |
| November | 20..... | "Land Without Lakes or Rivers" |
| November | 27..... | "Gateway from the Wilderness" |
| December | 4..... | "Key to the Great Lakes" |
| December | 11..... | "Moody River of Shifting Sands" |
| December | 18..... | "Rivers of Silver and Broken Hopes" |
| January | 8..... | "Monument to the Might of Water" |
| January | 15..... | "Stronghold of the Buccaneers" |
| January | 22..... | "Rivers of Magnificent Mystery" |
| January | 29..... | "Starving Time on the James" |
| February | 5..... | "Frozen Waters of the North" |
| February | 19..... | "Rivers of Dreams and Destiny" |
| February | 26..... | "Frontier Days on the Ohio" |
| March | 5..... | "Man-Made Water Ways" |
| March | 12..... | "Steam Conquers Wind and Current" |
| March | 19..... | "Waters for Green Pastures" |
| March | 26..... | "Oil on Quiet Waters" |
| April | 2..... | "Foods for the New World" |
| April | 9..... | "River of Gold" |
| April | 16..... | "Boom Days in the Jungle" |

FIGURE 7

WEDNESDAY PROGRAMS

Time: 9:15-9:45

| | | |
|---|---|---|
| October | 24... | "The Scarlet Fringe" |
| October | 31... | "The Smuggler's Sloop" |
| November | 7... | "Mr. Popper's Penguins" |
| November | 14... | "All Sail Set" |
| November | 28... | "Sad Faced Boy" |
| December | 5... | "Winterbound" |
| December | 12... | "Manga" |
| December | 19... | "Petite Suzanne" |
| January | 9... | "Traplines North" |
| January | 16... | "Meggy MacIntosh" |
| January | 23... | "Aztec Drums" |
| January | 30... | "Rebecca of Sunnybrook Farm" |
| February | 6... | "Drums in the Forest" |
| February | 13... | "One String Fiddle" |
| February | 20... | "The Red Dory" |
| February | 27... | "Dark Star of Itza" |
| March | 6... | "The Great Geppy" |
| March | 13... | Presented in cooperation with "Junior Programs," Inc. |
| March | 20... | "American Tradition Folk Ballads" |
| March | 27... | "The Dauntless Liberator" |
| April | 3... | "The Wonderful Locomotive" |
| April | 10... | "Red Horse Hill" |

FIGURE 8

THURSDAY PROGRAMS

## CHAPTER V

## CORRELATION AND INTEGRATION

Correlation. Correlation is connecting systematically one or more subjects. The very best way to teach is by correlating, and once more the American School of the Air proves worth-while because it presents excellent topics for correlation. In the rural school it simplifies the complicated program with the many classes of grades and subjects. In the one grade classroom one finds social studies programs more feasible when correlated with other subjects.

Integration. Integration is a newer term, and consequently it is greatly overworked, especially from the standpoint that integration is not often possible or probable. Integration is connecting systematically, or forming into a whole, all subjects. It is a difficult task, and a topic more often excludes one or more subjects. When possible to find some excuse for the appearance of that subject one usually sees clearly that it is better to leave it to its own part of the curriculum. Subjects integrated in this way are included to the detriment of the regular requirements.

### RURAL SCHOOLS

The rural school schedule, adjusted to correlation of subjects and grades interwoven with the radio program, is most effective. The rural teacher should have a schedule posted in

her classroom, or on her schoolroom door, so that visitors may know the order of classes. Her plan book, or some type of filed plan, must be available for the superintendent or supervisor. All who have tried to have these materials on file have known that from day to day this schedule was not a workable program. The hours are not sufficient. One class needs more time and attention than another, the drill periods are lengthened, and this necessitates omission of another equally important class. Where rural teachers meet, whether at teacher's meetings, teacher's conventions, or in a chance group, their chief school concern proves to be their school program. The block program, as shown in figures 1 and 2, is an excellent solution for the rural teacher. Visitors more often find her following her routine as blocked. She finds it flexible enough to meet her needs, and the needs of her pupils without sacrificing some important subject at the expense of another need.

To choose at random some topic, and ask all the grades which study history to look up all references on that subject is impossible. It would take so much outside preparation to present this in a logical manner that no teacher could find the time to continue this procedure. The radio program is there for the class, ready and waiting to bring this material to their classroom. It supplies an incentive, stimulates the interest, brings in a vast amount of materials without troubles of research, and expenditure of time and money, offers a related

program from week to week, and stabilizes a correlation unit.

Even in research, the eighth grade child is not anxious to read sixth grade material from their text books. Here is an opportunity. There are sixth, seventh, and eighth grade pupils. The history topic is a broad one. It is treated in some form at every grade level. Each group reports its findings. A few are chosen to leave their regular texts, and to serve in library research groups. Then the round table discussion brings to all, the materials found. Every child makes a contribution, every child learns far beyond the scope of his own text. The conversation so sought after in stultified English classes is responsive here. It is one class instead of three, for the main subject, and conversing takes care of another problem. These points, which come about naturally, are discovered by the alert teacher, and checked off on her list of "musts" in the various courses of study.

Having dropped any attempt to integrate, or correlate just to use the method, the instructor is free to call in all related subjects as needed. The articles and stories, which children wish to write for their folders, furnish interesting composition substance. Letters written to obtain information, free materials, or orders for supplies create actual needs for letter writing. No child dislikes to write a letter that may really be mailed, especially if he himself will receive an answer. One column on the blackboard could be set aside for

spelling words with which children wish to become familiar. They enjoy making their own lists, and the words are much more difficult than any teacher would expect a class to spell correctly. Good penmanship is necessary for a letter to be sent through the mail. Already reference has been made to soap carvings, drawings, map collections, showing how hand work, art, and geography have been correlated.

## URBAN SCHOOLS

The teacher of one grade has many advantages over a rural teacher, or a teacher in a departmental school.

This teacher may wish to use from three to five radio programs each week. Literature will be a separate unit, but correlates with reading, library science, and possibly with spelling, penmanship and English.

Music is a second fairly separated topic, but this broadcast often contributes to knowledge of music, costumes, customs, and growth of the countries which are being studied in the social studies field.

The Monday, Wednesday, and Friday programs may correlate for one week, and not the next,

One block of the program is necessary for arithmetic which needs regular attention, yet may be supplemented by problems arising in correlation.

Correlation promises well-motivated, harmonious, consecutive, and resultant lessons.

## CHAPTER VI

## HOW TO MAKE THE MOST OF THIS TOOL

Listening to a program of the American School of the Air is valuable. A little preparation increases this value. Proper correlation, or integration, an intelligent building of the school course of study around radio topics, as instructed in the preceding chapter, makes its help indispensable. In this section an effort has been made, to show the effect of correlation, the ease in which all subjects are brought into the plan, and some of the resulting benefits.

### TEACHER'S PREPARATION

The teacher needs to spend time in daily preparation for her radio classes. Preliminary research may be classed rightly as teacher preparation. That research was for her information about the possible achievement through good use of broadcasts. Her equipment-scouting was preparation. Making adjustments, or thinking through methods of meeting criticisms was preparation. Organizing the school program was necessary, and helped her to prove to others that her idea was practical. Correlation plans helped her to see where it would be best to correlate, and where the program as a separate unit would be better. Now comes the day to day preparation of separate programs, and the evaluation of all materials available.

The well-fortified radio, classroom teacher has these helps before her:

(1) She has studied her brochure very carefully.

(2) Her file contains a card with all books necessary for use in several programs. The list is checked in one of three ways:
   a. available in public or school library
   b. obtainable at nearby city library
   c. too advanced for use in my classroom

(3) Pictures, slides or films, to be used, are listed, and she has made previous arrangement for their rental.

(4) She has decided upon correlation, integration, or a separate unit.

(5) Her reading table is well stocked with books, with reference indications, so that the children have been orienting themselves in each new field.

The lesson in question is not the broadcast for the following day. It may be ten days before the broadcast she is considering. She is ready to plan a library trip. A committee must be appointed for the research for the class. She lists the group considering their abilities, individual interests, and more than all else she includes some one pupil who has had fewer opportunities, because of less ability, to join the group, paying special attention to his needs, and making a definite place for him.

The letters asking that free materials be sent, must be written. An English lesson is planned. Perhaps five students write for the same articles. The best letter may be chosen to go in the mail. A group with an appointed leader could collectively write one letter, while the other children work on research topics, duplicate tests, maps, or sheets of prepared information, for note-books.

There will be four days for this preparatory work. During these four days there may be: an English period for letters; a reading period for silent reading; a literature period for selections from literary works; an art period for models and drawings; a geography period for maps; costumes for characters; location of countries studied; a list of spelling words which will be needed for use in note-taking, in preparation of note-books afterward, or just for a general knowledge of vocabulary. And so, the question of correlation shapes itself into the program, without special effort.

Well oriented to the topic she has been studying, the teacher is ready for her introductory lesson. She prepares a list of questions to be given orally, as a written quiz, or used as topics for class discussion. These are points with which she expects her class to be already familiar. She has worked with these pupils through the whole school year. Recitations have shown her what topics her pupils are prepared to discuss. It is wise to be sure that one is not expecting too much of the children

in the way of retention of factual knowledge.

A small map of the locality may be made on a slide, and flashed on the blackboard. Children locate places they recognize by chalking names. When their voluntary information is exhausted suggestions may bring forth more. Then the test questions may be given, and checked quickly. Pupils see at a glance how much they already know. Pupils and teacher alike, are now wondering how the "teachers of the air" are going to introduce the subject. There are only two paragraphs of hints about the subject. Everyone wishes to know enough about it to listen intelligently.

This pre-test prepared, and presented, the teacher is free on the following night to list topics and references which will be helpful to pupils. Groups may be assigned to report on different topics in a class meeting the next week. All this takes place before the broadcast actually is heard. Then comes the day of the broadcast.

The pre-class work has had a definite value. Pupils watch carefully for new ideas. Each familiar part of the program brings smiles. With notebook maps before them, they listen for familiar places to be mentioned. All make note of new places for location, and of all new points, to be discussed later. This is their class work.

Post-class work may be divided into three parts. A period directly after the broadcast, for a short discussion of the

program, is valuable. Notes are compared. The teacher makes certain that each child has some working knowledge of the lesson.

The second step is the pupil's own contribution for this lesson. It is well to require something to show for this hour of receiving. To limit the contribution to a story, a drawing, or a model is a disadvantage. Suggestions may be needed by some pupils. Left to their own discretion, pupils will then do much more than one could expect to develop from a definite assignment. One who contributes little will soon be ashamed when he sees the efforts, successes, and praises of his classmates.

The third step is preparation of a quiz review of new facts of the lesson to find out how many pupils have retained the impressive information. Five to ten questions are sufficient, and yes and no, multiple choice, or filling of blanks, suffice better than a waste of time in composition.

On pages 45 through 61, there are illustrative lesson plans, pre-tests, and post-tests for specific broadcasts, and an example of a slide for use in a projector.

The broadcast "Starving Time on the James" was heard by the elementary and sixth grades in a vocational school for girls. In preparation for this broadcast, the elementary group reviewed stories about Sir Walter Raleigh and Queen Elizabeth, Raleigh's pipe of tobacco, and John Smith and Pocahontas.

Roanoke Island, Virginia, the James River, and Jamestown were located on outline maps of the United States.

"15. Starving Time on the James

January 29

After the failure of Raleigh's Roanoke colony, the English made a second attempt at colonization, in 1607, at Jamestown on the James River in Virginia. Few of the colonists would have embarked from England had they known what lay ahead.

They were immediately attacked by Indians. Sickness and savages took large toll. Supply ships sailed from England the following year with 197 settlers, but 144 died on the way. The survivors found fever and hunger in the colony. The Winter of 1609-10 will always be remembered as "starving time on the James". But it was the settlement's turning point. Help arrived, a stable government was formed, and colonists gave up hope for quick riches in gold and turned to agriculture in earnest.

These harrowing tales were not made known to unfortunate emigrants as they left England. They were given glowing accounts of riches and easy life by the promoters who would profit by colonization. In this way the Pilgrim's were led to believe that they were going to an established settlement in the Virginia region, and never dreamed they would land on the rocky, wind swept coast of New England at Plymouth Rock.

ACTIVITIES:

1. Show how the new government that followed "starving time on the James" affected the lives of the settlers.

2. Name three native Virginia products(potatoes, tobacco, corn), and list the important products of Virginia today."[1]

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[1]Department of Education, the Columbia Broadcasting System, The American School of the Air-Teacher's Manual. (New York. Columbia Broadcasting System, Inc., 1940), p. 55.

PRE-TEST--"STARVING TIME ON THE JAMES"

1. What three products grew in Virginia when Raleigh's companies attempted settlement on Roanoke Island and at Jamestown?

2. Who was the leader of the Jamestown colony?

3. How did he succeed in making these "gentlemen" work?

4. Two classes of people were brought as slaves and sold in Virginia. Can you name these classes of people?

5. Can you write two sentences about Pocahontas?

POST-TEST--"STARVING TIME ON THE JAMES"

Underscore the phrase which makes the sentence true:

1. Our broadcast was about a colony at
   - Roanoke
   - Jamestown
   - Plymouth

2. They settled on the
   - St. Lawrence
   - Hudson
   - James

   river.

3. During the sea voyage the men tried to hang
   - Christopher Newport
   - John Smith
   - Captain Winship

4. There were
   - sixty
   - six hundred
   - one hundred

   colonists and
   - one
   - two
   - three

   ships.

5. The King had placed directions in
   - an oak tree
   - a steel box
   - the master ship

6. John Smith tried to get food from
   - Powhatan
   - King Philip
   - Sir Walter Raleigh

7. They offered the Indians
   - beads and copper
   - corn and grains
   - vegetables and guns

   in exchange for food.

8. Pocahontas was
   - 15 years old
   - 11 years old
   - 6 years old

9. She
   - took Captain Smith in her canoe down the river
   - hid Captain Smith in a dark room for several days
   - put her head with his on the chopping block

   to save his life.

10. Powhatan allowed Pocahontas to
    - marry John Smith
    - adopt him as her brother
    - bring him home to live

11. Captain Smith had his men
    - kill the eight Indians
    - hang the eight Indians
    - hobble the eight Indians

    who came to their camp with food.

12. Captain Smith returned to London

    - because he was ill.
    - because he wanted to help London
    - because he didn't like Virginia

| Number of question | Number of papers having correct answers to questions. | |
|---|---|---|
| | 6th | Elem. |
| 1 | 5 | 5 |
| *2 | 2 | 1 |
| 3 | 4 | 5 |
| *4 | 0 | 0 |
| 5 | 3 | 6 |
| 6 | 4 | 5 |
| 7 | 5 | 4 |
| 8 | 3 | 3 |
| 9 | 4 | 4 |
| 10 | 4 | 4 |
| 11 | 3 | 2 |
| *12 | 0 | 0 |

Probable reason for low scores on questions starred
2---poor work
4---difficult question having two answers
12---poor alternate statement in test.

FIGURE 9

EVALUATION OF POST-TEST RESULTS

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

| Number of pupils | Score | Number of pupils | Score |
|---|---|---|---|
| Elementary | | Grade Six | |
| 1 | 79 | 1 | 80 |
| 1 | 75 | 2 | 72 |
| 1 | 71 | 1 | 64 |
| 1 | 54 | 1 | 40 |
| 2 | 33 | 1 | 33 |
| Median Score | 67 | Median Score | 64 |

FIGURE 10

POST-TEST RESULTS-"STARVING TIME ON THE JAMES"

"14. Rebecca of Sunnybrook Farm

By Kate Douglas Wiggin

January 30

"Her eyes as stars of Twilight fair;
Like Twilight, too, her dusky hair;
But all things else about her drawn
From May-time and the cheerful Dawn;
A dancing Shape, and Image gay,
To haunt, to startle, and way-lay."
William Wordsworth, from
Frontispiece to
REBECCA OF SUNNYBROOK FARM
(Houghton-Mifflin)

Things begin to happen at Sunnybrook Farm after Rebecca Randall comes there to visit her maiden aunts. "Uncle" Jerry Cobb, the village cab-driver, aids in some of her kindly schemes. Adam Ladd, to whom she tries to sell soap, becomes "Mr. Aladdin" and later falls in love with Rebecca.

CHIEF CHARACTERS: Rebecca Randall--who has a sunny disposition and a vivid imagination. Jerry Cobb--a cab-driver who becomes Rebecca's friend. Miranda and Jane Sawyer--Rebecca's aunts. Adam Ladd--a wealthy young man who sends Rebecca to school. Emma Jane--Rebecca's school friend.

After Kate Douglas Wiggin had sold her first story she realized that "there were no more stories in her head" and she set out to find experience from which to write. She founded the famous Silver Street Kindergarten in San Francisco, the first free kindergarten west of the Rockies. To raise money for it, she wrote The Bird's Christmas Carol. It was her first book, and immediately established her as an author. The Story of Patsy, A Summer in a Canon, Polly Oliver's Problem, and Timothy's Quest soon followed. One day she dreamed about a "quaint, dark-haired gypsy of a girl, riding in a stagecoach," and, upon the background of her own New England childhood she wrote the story of Rebecca of Sunnybrook Farm."[2]

This is a synopsis of a literary program of the American School of the Air.

[2]Ibid., p. 71

The program, "Rebecca of Sunnybrook Farm" was heard by a group in the same vocational school for girls. Two rooms participated. The remedial room was used, and the radio was the personal property of the remedial teacher. The reception was excellent. The group consisted of six elementary pupils, and ten sixth grade pupils.

The remedial teacher prepared the pre-test, and the post-test. Tests were given in the home rooms.

The elementary teacher got the book "Rebecca of Sunnybrook Farm", from the school library. She chose carefully two or three of the most interesting incidents of the story, and read them aloud to her pupils. Then the copy was placed on the reading table, with several others by the same author. Several days before the broadcast these children talked expectantly about the literature program, and about the story. Several children read a part or all of the book.

The sixth grade teacher read the synopsis from the brochure, and placed some of the books on the reading table. Some of the members of this group had read the story, and others had seen the movie based on the story. Sufficient interest was aroused by this discussion.

PRE-TEST--"REBECCA OF SUNNYBROOK FARM"

1. Rebecca of Sunnybrook Farm was written_____

_____ _____.

2. Rebecca was ___ _____ _____.

3. The cab-driver was _____ _____ _____.

4. Rebecca's school friend was _____ _____.

5. I have read this book. Yes No

6. I have seen the movie. Yes No

POST-TEST--"REBECCA OF SUNNYBROOK FARM"

Choose one of these answers for each blank:

| | | |
|---|---|---|
| Had very bad colds | Mr. Cobb | candy |
| had to work hard | Emma Jane | the missionary |
| in a stage coach | a bed | pork and beans |
| on the driver's seat | Hannah | Aladdin |
| the brick house | Jennie | Miss Dearborn |
| her home in Maplewood | Miss Cobb | Eleanor Porter |
| Emma and Hannah | a lamp | Mr. Cobb's |
| Kate Douglas Wiggin | soap | Miranda and Jane |

1. Rebecca of Sunnybrook Farm was written by_____.
2. The driver of the stagecoach was ____ _____.
3. Rebecca rode_____.
4. _____ was the child the aunts really wanted.
5. The two aunts were _____ and _____.
6. Rebecca ran away and went to _____ _____.
7. Rebecca's new teacher was _____ _____.
8. Her best school friend was _____ _____.
9. The little girls sold_____.
10. The girls were trying to earn _____for their friends who were poor.
11. Rebecca went to the Ladies Aide meeting because her aunts _____.
12. Rebecca invited_____to stay with her aunts for a few days.
13. Miranda fed the guests_____.
14. The author once saw a _____and thought she would make a good character for her new book. This is how Rebecca happened to become the little girl of the story.

"16. Cocoa

February 10

> Our chocolate candy and breakfast cocoa begin their story on the cacao plantations of Equatorial America. Brazil is America's largest producer of the cacao-bean. As in the broadcast on coffee, we show that the cacao workers include plantation owner and farm-hand, shipper, commodity broker and grocer, and in addition, the confectioner."[3]

Before the day of the broadcast on Cacao the two groups talked about cocoa in their home rooms. No pre-test was prepared. Everyone liked cocoa to drink. Few of the elementary children associated cocoa and chocolate. Some sixth grade pupils knew that cocoa came from cocoa beans, and they all knew the company names: Hershey, Baker, and others seen so obviously on candy bars. The remedial teacher obtained an Educational Exhibit from the Hershey Chocolate Corporation, Hershey, Pennsylvania, manufacturers of chocolate and cocoa.

The exhibit contains:

Bottle No. 1--Cacao Beans

Bottle No. 2--Nibs

Bottle No. 3--Eyes

Bottle No. 4--Shells

Bottle No. 5--Chocolate

Bottle No. 6--Cocoa Butter

Bottle No. 7--Cocoa Powder

The exhibit was presented to both classes, and informa-

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[3] Ibid., p. 21

tion was given about each bottle's content as the children examined it. One child contributed the information that cocoa butter is used for chapped hands, another knew that cocoa butter is an ingredient of a Hershey washing, soap powder, and a third child had had a drink prepared from cocoa shells and cracked cocoa.

The program proved most educational. The post-test was used the day after the broadcast. The six elementary pupils showed a working knowledge for the vocabulary and some checking. The teacher read and discussed the statements with them.

Grade six took the test showing excellent scores.

This teacher preparation sounds like a big job, but it is no more than a teacher should do for any recitation. She cannot delay preparation for radio. By so doing she loses valuable helps. The broadcasts go on. Working under pressure, to some extent, brings greater dividends.

POST-TEST--"CACAO"

Check every sentence which is a true statement about cacao as heard in today's broadcast:

1. In 1770 Josiah Contannon bought cocoa beans from the West Indies to grind, and make into cakes to be used for a chocolate drink.

2. Josiah Contannon kept a diary which was carried on after his death by his son, and his successors, and that is how we can know so much about the beginning of cocoa manufacturing.

3. Coffee is a product of Brazil.Coffee testers taste sample cups of cocoa to determine whether the right combinations have been used.

4. When so many workmen joined the Colonial army it became very hard for Josiah to continue his cocoa industry.

5. During the World War his son James also found it hard to continue his work.

6. After the war $1.00 in species, equalled $72.00 in Continental money.

7. In 1777 there were only 2100 houses in Boston, and only 400 in New Haven.

8. Josiah started with 7 men, but as early as 1810 they employed 400 men.

9. In 1848 a new three story mill was built. It was used for roasting cocoa. The insurance was for $133.

10. Josiah's son Thomas made spiced cocoa sticks which sold at the stores, and helped to make people know about cocoa.

11. Coffee powder was nice for miners to take to the mines with them because it could be made so quickly.

12. When Jenny Lynd made her first appearance in America, September 11, 1850, the company sent her two bars of No. 1 Chocolate as a gift.

13. In 1867 Thomas won a prize award at the exposition.

14. Abraham Lincoln, in his address, hinted that cocoa was soon to become a leading product.

15. When Henry Levering became manager, men received $2 per day, and women 90¢ per day. Now wages range from $25 to $60 per week in these factories.

16. Mr. Levering told a workman that when flowers in a garden could be seen it was time to be at work, because working hours were from daylight to dark.

17. Cocoa beans are grown in Africa, Brazil, and Venezuela. They grow in pods on trees.

18. Screens are used to sift cocoa beans, because keys, bullets, and other things get mixed into the beans.

# A MAP KEY

States

Virginia--orange

Territories

Louisiana--purple
Oregon- yellow

Rivers--(blue lines)

St. Lawrence
Mississippi
Ohio
Columbia
James

Bays

Hudson Bay--blue

Lakes

Great Lakes--blue

Industrial sections

| | |
|---|---|
| Iron-- | red dots |
| Furs- | brown dots |
| Coal | black dots |
| Cattle | green dots |
| Gold | yellow dots |
| Silver | yellow dots |
| Cocoa- | brown (solid) |
| Sugar | red crosses |
| Fruits | orange dots |
| Tin- | green crosses |
| Nitrate | brown crosses |
| Aluminum- | red circles |
| Precious stones- | black circles |

Note: Separate maps were used for produce, and minerals.

This key was used in 1941-42 in connection with geography broadcasts.

Brazil is in South America
North America
Europe

Our lesson was about nuts, citrus fruits, vegetables.

The first orange grove in the United States was in Florida San Gabriel Mission Texas

The states that produce oranges are Texas Maine New York Connecticut California Florida Louisiana Alabama Mississippi Michigan

Mr. Thatcher has a grove of oranges covering 700 acres 95 acres 10 acres

FIGURE 11

A SAMPLE SLIDE

## PUPIL'S PREPARATION

Preparation, for lessons of the American School of the Air, becomes a hobby. Page to page assignments are over. No longer do teachers say, "Now take out your geographies."

## PRE-CLASS WORK

Pupils dash from the school bus to show the teacher a clipping, a picture, or some model they have brought with them. They go to the reading table to finish an interesting story begun the previous day. A youngster takes his seat quietly, and colors his map, or goes to the wall map or globe to verify something about which he is doubtful. Spare moments, throughout the day, are filled with interesting work. The pre-test is not a dreaded examination. It is a self-test to find what one already knows. It shows what one needs to learn, and the task is not hard, to complete the needed information.

## CLASS WORK

Class work is regularly carried out. Pupils sit at attention, relaxed but not lazy. They come prepared to take notes. All pencils are sharpened, books in readiness, and little moving about is sanctioned after the program is on the air. The moment the radio is turned off the questions are forthcoming. All are eager to learn, to give information gained, and to formulate ideas about their contribution to the class as a result of this program. Each child knows that he or she will bring in some-

thing typical of today's lesson. A graph; a picture; a chart; a newspaper map; a drawing, neat, and well-done; a soap carving; a toy boat; a birch wigwam; a bird house; a short story; a letter to someone asking for free materials; a colored slide for classroom use; a poster for the exhibit; or a book containing a story to be read in reading class.

## POST-CLASS WORK

A few days later the final quiz program reviews for us this information, and another subject takes the place of the one which has been first in our thought for days.

Many hobbies of today were prompted by a radio class in grammar school.

## LIBRARY FINDINGS

Library findings are very valuable to pupils. Books found, and information read, make up a small part of this program. Pupils learn to look to research for all topics. Depending upon one book as a source of information is now out of the question. Broadening begins at once. Harder reading is before the child. His interest and determination help him to grasp meanings before he can read all words. The valuable skimming begins. Then comes a pouring over deeper information for points to be remembered. This has taken care of a big reading problem. Pupils are reading outside of reading class, and outside of school hours. This doubles the actual time spent on reading,

and practice is usually the most necessary.

One radio group visited libraries in six nearby towns. The magazine subscriptions were checked, so that access to many more periodicals was possible. Different forms of library science were observed and familiarized. Children felt at home in any library. Library files were used by the children under guidance. Pupils, with teacher guides, could visit stack rooms where previously they had had no entrance privileges. In a new library where juvenile books had never been accessioned and shelved, the librarian invited the children to come in small groups, and shelve the books for her. The teacher worked with her pupils in their own classroom, and their own books were shelved. Paper-pads were used, and sample card files made. Then in small groups, accompanied by their teacher, these children worked several nights each week for two weeks placing real library books on real library shelves.

One librarian gave radio groups library games to play. Each member of the group was presented with a card she had prepared for him. In a short period of time pupils worked laboriously with card files, and in stacks, locating books, poems, magazine advertisements, and various information requested on the card. The one finishing first, with all answers correct, received a prize.

## ACTIVITIES

Models. Surprising models are brought to the classroom.

In 1937, a series of programs called, "Elements in American Life," lent itself well to model-making. The first program, "Shipping," started an industrious building of boat models of all types. Pictures of the children who made these models, each holding his own model, are shown in the illustrations on page 65, also close-ups of the models on a card table. There were steamers, sail boats, clipper ships, birch bark canoes, and soap carved row boats. "Roads" followed, and inspired with modelling for the previous program children filled their workshops with all types of vehicles which we see on our roads. Covered wagons to trailers, all won distinction.

"Communications" instigated private telephone lines running from tree to tree on the playground. Messenger boys carried telegrams, older boys made codes for their messages, and had toy sending sets of their own construction.

Many of these programs were incentives for varied activities, but "Airplanes" brought the next exhibit of models.

Hobbies. Modelling became a hobby for many boys, and a few girls. Girls collected dolls while others bought one or two dolls, and made sets of costumes depicting the dress of various countries. Drawing began with chapel windows, and fine collections of designs resulted for the artistic boys of one school. One program suggested many types of hobbies, and collecting of stamps, pennies, quilt patterns, bottles, buttons, and other objects became quite the thing to pursue. One girl

began map making, and on her collection of maps located every river, gulf, bay, peninsula, city, town or state, that was mentioned on a broadcast. These were colored carefully, and made attractive with gasoline brushing which set the crayon to resemble water coloring. Camera owners took pictures of pupils in costume, of models and model designers, of handwork, or of collections. Some pupils started a card file listing all books read, or used for reference. Several boys competed in a contest for the longest list of vocations. Their lists were very long, and one boy won a prize for his list. These boys decided to keep, for their folders, cutouts of all the vocations they could find illustrated, and label them. These were finally mounted, grouped according to industries, and presented a worth-while piece of work containing much information.

Excursions were planned, and the school bus took pupils of one school to mills, libraries, the White Mountains to see "The Great Stone Face," and to museums. The Arnold Trail was followed by one school group after study of the trail, and its various landmarks. Pictures were taken of the rocks bearing inscriptions. The Indian caves were located, and much was learned about that section of Maine. As a result of library study the upper grades, in a rural school, were invited to appear at a county teacher's convention to speak of library visits, answer questions from the audience, and play several library games, to show how they had become familiar with literature

characters. On display were posters by all the visiting pupils. While not a project of an actual program of the school of the air, it was an outgrowth in literature from the excursions, research, literature notebooks and book lists, and class work of the whole school. Rural schools of the town were asked to send a representative from their school to take part in a convention program at the State Teacher's Convention. A seventh grade girl from the radio group, used for her topic the geography program prompted by radio broadcasts, and exhibited fine posters and booklets.

Units of work have been well presented throughout this chapter. These units with pre-test, brochure articles, and post-tests could be used by teachers without hearing the broadcasts. Where radio reception is not available this material found in the American School of the Air brochures forms a base for excellent units of study. At the close of the school of the air year, the first of May, a teacher has in the inside cover of each book, on the paper which she has fastened there temporarily for her own use, a list of references brought into use by her pupils, during the year. In the course, she is then prepared to glance through the remaining pages, and outline units which will cover the required material satisfactorily. There are two months for this new work, and for review. Review is not as necessary now, because pupils have lived these lessons. They will remember.

## CHAPTER VII

## EXHIBITS

Bulletin boards, borders over blackboards, or corner spaces for papers, should have attractive and fairly new materials. It is often a problem to a teacher to have current materials, yet attractive displays. To have materials at hand for convention meetings, graduations, or public school exhibits is satisfying. There are frequent calls for such collections. Libraries often feature school work in their exhibitions. American School of the Air furnishes ample suggestions for such displays.

### CLASSROOM EXHIBITS

There are many ways to make classroom exhibits attractive without spending too much time which could well be spent for other preparation. Children enjoy taking responsibility for bulletin boards, and they are often quite artistic about arranging materials. There is danger of over-crowded spaces, due to failure to remove week old materials, or to putting up so many pieces at a time that one gains little by studying the articles. Dividing spaces by subjects, relates materials better. Letters cut, and pinned at the top of a space for English, current events or social studies, are colorful, and clarify the display for a visitor who knows nothing about the classroom interest. Folders, marked to correspond, are fine for preservation of these mater-

ials. Children's papers good enough to appear on a bulletin board, are usually worth saving for future emergencies.

Models, which are brought in groups depicting one program, are taken home to allow space for later models. Teachers may ask to hold one of each. Children like to keep their models, and when asked, may keep them in good condition with the expectation of further exhibition of their hobbies. Snaps taken of the models, when displayed all together, take little space, and make a fine exhibit when mounted. They picture articles which cannot be carried from place to place, and are inexpensive.

Every child has a folder or notebook for his papers, drawings, and clippings. Folders made from wrapping paper, which has been cut, lettered in color, then covered with clear varnish, last well, and are very attractive. Separate, loose-leaf covers for each subject may be made to hold materials, and slipped inside the large folders. One group arranged a sample cover, and had heavy cardboard covers printed at the printing office at small cost. Construction paper of various colors, with cutout letters neatly arranged, makes a splendid exhibit, but these covers are easily torn, and are of little use except for a final display.

A library table arranged carefully becomes interesting and useful. A reading table should appear in every classroom, and is an exhibit of the type of work done in that room. A

A bouquet, a plant, or something artistic found in the library corner makes the room more homelike, and shows how good housekeepers help to promote reading habits.

PUBLIC EXHIBITS

In the preceding paragraphs classroom exhibits have been suggested with the thought held in mind about public exhibits. Those materials preserved are a much better example of actual school work than the colorful exhibit made over night, usually nearly all the work of the teacher, to meet an emergency when nothing has been saved.

Having materials at hand, the one point to consider is the space which will be available for the exhibit. Some teachers take much to display. They use all of the space allowed them, and part of the space that should be used by another teacher. This is selfish, and too, there is usually a lot of the material which is poorly done, and could well be left out. On the other hand, the teacher who takes too little material finds her space sparsely filled, and near an over crowded exhibit one can never be certain which will be the most effective. It is best to take a sufficient amount of material, have a definite plan for its display, and not be disturbed to have to cut down on space planned. An attractive booth arrangement requires only a line across the top with large seven inch letters colored or covered with crepe paper, bearing the name of the school, the name of the project, or simply "hobbyland".

Each child looks first for his own work, and his own name. A parent looks first for her child's work. Small, typed slips of paper having a child's name and grade, and a short sentence of explanation, when called for, evaluates the display.

Papers, pictures, or collections, which will be injured by handling, can usually be placed under glass. Small objects placed in paper cake holders, which are glued to a cardboard are safe with a glass cover over the cups, and can be seen well. Glass really adds to an exhibit.

A button collection was sewed to a young girl's dress. This girl tended the exhibit of her school, and wore her dress heavy with buttons. Another collection of buttons owned by a little boy was in book form. Sheets of heavy cardboard bound with ribbon, in loose-leaf arrangement, had buttons sewed on each page, and stood open for people to see. His picture was a part of the cover decoration. The child was so young that this picture made the exhibit far more impressive for those who did not know him by name.

Plan to make these exhibits talk, and then invite parents and friends to visit the classroom. Parents are proud of their children, and in the busy whirl of larger schools, more work, and much routine, we have failed to remember, to whom our youngsters belong, and where the greatest interest in them lies.

## CHAPTER VIII

## SOME OBSERVATIONS

Soon after American School of the Air programs begin coming to the classroom observations of interest, playground influences, study habits, and group participation brings proof of their extensive values.

### THE CHILD IN SCHOOL

The normal child. The normal child responds very quickly to the school broadcast. Each member of his family has a favorite program. Whether news, quiz or contest, a favorite program becomes a topic of family conversation. Now the child is growing up. He can throw in his bit about his programs. He has a purpose for careful listening and participation. It is a grown up activity. It takes away the regular routine of study and recitation. Boys and girls in his radio world are telling him about countries and customs which interest him. Perhaps he has had a secret desire for a hobby to which no one paid attention. It seemed silly to continue it, but now it is quite the thing to have a hobby. His world is just beginning. He brings his airplane or boat model to school. The teachers like it, and the boys want to know how it is constructed. The announcer suggests new models. A library book has directions for better models.

These things, and many more actually happened in class-

rooms. Children want to know more about localities, people, products, and habits of other nationalities. They search histories and geographies for material; magazines and papers for pictures; and newspapers and atlases for news and for maps. Graphs, which they could not read, and were not interested in, become a necessity, and they seek help in reading them. Bulletin boards are covered with important articles and pictures, which have been supplied by the children themselves. New ideas are formulated each day. The playground becomes an Indian reservation, the groups are tribes, their houses are not all wigwams. Kivas are built, cliff dwellings are imagined. Head bands with feathers appear. The men equip themselves with arrows and quivers. Mocassins are located. Indian suits and dresses are taken down from the attics. Girls bring their scout books, get themselves a squaw name, and name the Indian children of their tribe. They make papoose cradles to hold their dolls, and wear them on their backs. Their bead looms are again in use, and on rainy days they busily make bead belts and bracelets. Squaws work at large rug looms which the boys construct.

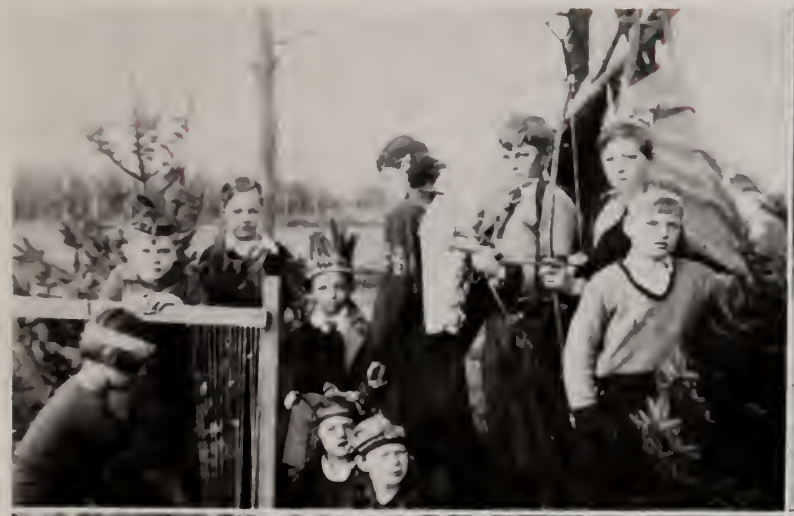
Long before they tire of this a soap carving program brings new interest. The tables are covered with boxes containing knives, soap, and other equipment. The Taj Mahal, Parthenon, and pictures of other famous buildings appear on the bulletin boards. Bits of soap shape into building designs. Primary pupils, not to be outdone, start their seals with balls

balanced on their noses.

Models of the Taj Mahal and drawings were sent by one group to the New York exhibit. These were accepted, exhibited, and returned with individual letters to owners late in the summer.

Another interesting bit of study grew out of a lesson in art depicting scenes from Michelangelo Buonarrotti painting Bible stories upon the Sistine Chapel ceiling, in Rome, and a second art lesson called "Color in a Storied Window," proved excellent stamina. This school group went on an excursion one week and studied all the church windows in three towns. Some fine designs of cathedral windows were colored. Some designs were copies of those seen and others were original.

The problem child. The problem child finds himself when school of the air begins. The non-reader listens intently, and he can discuss topics with the group. Before this he has had nothing to contribute, because he has not been able to read the lessons. One non-reader produced the best sample for exhibit of cathedral windows. He received his personal letter complimenting his work, and this achievement changed his whole attitude toward school. Non-readers who have eye difficulties, or are retarded in reading only, rely upon auditory senses more, and they remember points of the lesson better than pupils who read well. Often they are able to contribute something to a discussion which the other pupils did not hear or have not remembered.



In an institution where pupils are of lower average mentality, a child who could read only primer material enjoyed a geography broadcast on "Citrus Fruits". She could not read the check-tests, and the test was given her orally. She remembered seven states where citrus fruits are grown while the others of the group could remember five or less.

Discipline cases have been corrected through these programs. Discipline so often links itself with lower abilities that those who find themselves succeeding in this new work naturally drop their former attitudes quickly. The normal child who has been a discipline problem, when given a responsible duty such as tuning in each day for clear reception, will no longer need the attention gained through poor behavior. Some of the discipline problems arise when superior students finish work quickly, know the material before studying, or find work too elementary in part of their subjects. These youngsters serve on research committees. Their work becomes interesting. There is no limit to the amount of research possible. Pride in excelling conquers, and they broaden their experiences daily.

## THE CHILD AT HOME

In introducing the attitude and reaction of the normal child the home program has been briefly considered. Now we need to turn our thoughts to actual home situations. Table talk consists of news topics and radio character discussions. The child

left out of the conversation up to this time, who has gulped his food quickly, and excused himself early, begins to enjoy taking part in the discussions. His comments have been quieted before, but no longer must he keep silent. He has actual contributions. Father decided to listen more carefully, and locate cities and centers on his map, because Donald can talk about the people and localities intelligently. Mother listens in the following Wednesday because the Hamiltons visited the Polish Corridor last week, and the children Max and Alexis live on in Donald's heart. One would think he had traveled every mile of the corridor himself, so vivid are the scenes he depicts.

It was several years after this broadcast before the corridor became front page news again. Pupils who heard the Hamiltons on that day remembered all about the Polish situation. Letters began pouring in, and a former teacher read accounts of expression of gratitude that so many times knowledge gained in school was recalled. Several pupils got out clippings and school of the air notebooks, and read their stories about the Hamiltons again, laughed at the magazine pictures labelled Max and Alexis, enjoyed grandmother Hamilton's beaming face looking out from a page of these school papers.

## PARENT'S PARTICIPATION

Two references have already been made to parents awakening to the realization that a son or daughter is growing up. There are many more instances.

Grandmother cut pictures for Sylvia, a fourth grade pupil. Sylvia wanted pictures of fiords and haying devices to lower hay from steep cliffs, down to the deep gully below to prevent hauling it so far. These were for Francis because he had no magazines, and had listed three hundred occupations which he was trying to illustrate. She wanted co-operative pictures, and an egg with a name of the town, and the date printed on it. Grandmother was already listening every Wednesday afternoon to the Hamiltons so that her pictures would be the right ones, and so she could talk with Sylvia understandingly every week about her new friends. She now had to add the Thursday "Occupations" to her list. Francis wanted occupation pictures, but what were the radio instructors asking about?

Mother listened to the science broadcast every week because George wanted to try an experiment every Thursday night. He wanted potassium permanganate powder to heat in a test tube. He had a small chemistry set. He had the name of the powder written on a piece of paper so it must be correct, but should she buy it for him, at small cost, and risk his being burned or injured because she did not know about the experiment?

One girl who went on to high school contributed much to a science class one day when an experiment was tried and failed. She could tell why it failed, and she did the experiment for the class so that it worked. She explained that when she was in the sixth grade the group had tried this test after a radio broad-

cast one afternoon.

Phyllis' mother telephoned one night to inquire which newspaper contained the best helps for her girls. They subscribed to a local paper, but it contained so little that the girls were anxious to have a better paper. The school had the use of The Christian Science Monitor, so she decided to take the New York Times. She also asked which grade would benefit most by clippings about deltas for the "Cambodia in French Indo-China" program, because both girls wanted a clipping for a notebook. Regina won because the girls had an honor system. The one to find an article or picture first, put her initials beside it. She couldn't cut it until Daddy read the paper, and gave his permission to cut it, but the initials held it. Phyllis dashed to the telephone, and asked grandmother to cut and save the article for her so she succeeded, too..

Higher education creeps into the home circle.

## CONCLUSIONS

The program of the American School of the Air which is available to all teachers having the mere equipment for receiving radio broadcasts has been evaluated throughout this thesis in all possible phases.

The necessary approach with sufficient amount of preparation to insure a successful curriculum is encouraged. An invitation to all teachers to attempt this program without long periods of wishful thinking so unnecessary, and succumbed to only by those fearful of giving this a trial, has been extended. Precautions about making adjustments with proof that these suggestions are plausible are advanced. Helps in organization of school programs in the several types of classrooms show those programs used successfully by others in the teaching field. It is shown that correlation becomes a natural method, and it is one generally accepted by educators today. Preparation, classwork, and check testing are a vital core of this paper. That models, hobbies, excursions and units may become essential features of classroom work creating vast interest, and broadening experiences is illustrated. Exhibits which are actual products of the units are always at hand for parents and visitors to see, and through these exhibitions to learn, what their children are accomplishing.

The normal child begins to live in the classroom rather

than waiting to start a normal life of hobbies, and satisfying of curiosities after certain summits have been climbed.

The problem child contributes his possible quota, ceases to be an object of ridicule, and begins a natural walk in life. He joins a group, follows directions of more capable individuals, and fits into his nook unnoticed, yet adjusted and happy.

The child at home begins to grow up, and this is recognized by those about him. He joins the family circle, shoulders his chores, contributes bits of knowledge, manifests understanding of world affairs, and realizes that school is a means to an end, and an end much desired by him now that he has creative ideas, a goal in view, and an incentive for reaching that goal.

The problem is stated, elaborated, and proven by numerous examples.

The American School of the Air is enjoyable, progressive, reliable, broadening and comprehensive.

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An interesting treatment of the psychology of radio in three parts. (1) The novelty of radio as compared with evangelist, movie, rostrum, or the printed page depicts the disadvantages that radio must combat in dealing with voice alone rather than having all visual advantages. Its influence upon social life is discussed to some extent. Ownership as in our country versus government or other control showed the variety of program in United States as contrasted with the limited broadcasts in Europe. The visit to the studios seemed almost real to the reader, and one could well evaluate programs better after having delved into some of the secrets of sound production. (2) Experiments were given and tabulation tables present quite adequately the results of questionnaires on voice and personality judgment, sex differences of voice, listening versus reading, and the technique of writing script as combined with knowledge of effects over the microphone. (3) Some practical interpretations of ones fear before the microphone, sincerity of broadcast as it carries over to the listener, the difficulty of section prejudices-or the falsity of setting when one advertisement counteracts another. Teachers criticise the time given to education by radio, when in reality much time is available if we were better showmen instead of lecturers.

Darrow, B. H., Radio-the Assistant Teacher. Columbus, Ohio: R. G. Adams and Company, 1932.

The past, present and future of education by radio is depicted in this fine book. As it was written in 1932 many of the ideas of the future have been realized. The early hardships, dreams, and successes of the workers in this field are many and interesting. Important are the topics of uniting home and school, bringing those uneducated peoples of the world a chance to build their education up to the levels of those with whom they come

in contact who have been better privileged in educational lines, and the interest and advance of those children participating in these lessons in contrast with those still having only the formal methods of teaching.

Harrison, Margaret, "A bulletin listing all broadcasts that might be of special benefit to schools." New York: Teachers College, Columbia University.

An interesting bulletin containing information about summer courses in audio-visual education.

_____, Radio in the Classroom. New York: Prentice-Hall, Inc., 1937.

Lists various radio programs available to schools, contains suggestions, sample lesson plans, and programs of procedure, and describes benefits and correlations for classroom activities. Very good.

Kenny, Earle A., "The Classroom Use of Radio Broadcasting," City School of the Air. Alameda, Cal.

"In considering what programs should be used in the classroom much thought and preparation must be given. To just turn on the radio at the scheduled time and turn it off after listening and then forget about it is a waste of time and the broadcast will have very little value in contributing to the classroom instruction. The administration and the teacher must be aware of what programs are available, the subject matter contained therein, the time the program is to be heard and the station over which it is to be released. They must peruse the radio sections of the daily newspaper for program changes and for broadcasts arranged for special occasions such as world happenings or outstanding events and speakers. The net-work stations have made available in advance, bulletins and manuals announcing broadcasts that can be used for educational purposes. School departments having educational broadcasts mail teachers manuals often six months in advance, thereby allowing the teacher ample time to select programs which will supplement the instruction.

After the teacher has become acquainted with the various sources of information about available radio programs the next step is to select those programs which are adaptable to classroom use in the particular class or school for which the selection is being made." p. 32.

"Many conscientious teachers do not realize that they are hampering the results to be obtained from listening by stating that an examination will be held at the conclusion of the broadcast. The child cannot listen attentively without worrying about the examination. If the written examination is to be used as correlation, arrange to have it a day or so later and in such form as fill in, multiple choice, or true and false." p. 35.

Koon, Cline M., The Art of Teaching by Radio, Washington: U. S. Government Printing Office. 1933.

This booklet may be obtained from the Supt. of Doc., Washington, D. C. Price 10¢.

Directed activities where listeners are directed to perform definite activities during the broadcast are popular, actuality broadcasts of important public events are helpful, but debates are not proving practical or popular.
This contains directions for giving school radio plays quite in detail.

_____, Materials for Radio Education. Dep't. of Interior Building, Washington, D. C.

Information on summers at Ohio University.

N. E. A. Dep't of Elementary School Principals, Radio and the Classroom. Washington, D. C., 1941.

"It can send to the various broadcasting companies with a request that the committee be placed on the mailing lists for such monthly publications as NBC Presents, issued by the National Broadcasting Company, the Student Guide, issued by the Columbia Broadcasting Company, and similar publications of the other broadcasting companies. These list all educational material several weeks in advance and are mailed free of charge." p. 11
"Miss Bohn, Teacher, Blair School, St. Louis, Missouri, uses radio in a very different way. 'The radio has become an integral part of our day's work. In the morning we read the scheduled program and check those which we wish to hear. This selection necessitates a discussion of the relative values of the various programs and helps to build up criteria of judgment which we believe very important. While older children, because of their larger experience, are more capable of chosing, even little children can be guided in the setting up of standards and can learn to select programs wisely.

"We have our own inexpensive portable radio. We have no difficulty in adjusting time schedules. If a program will help us to do the things we have in mind, the time it is on the air is the time for us. We have listened to programs at noon, before school, and after school. Evening programs, and Saturday programs are often pressed into service.'" p. 27

MacLatchy, Josephine H., "Education on the Air," Tenth Yearbook of the Institute for Education by Radio, Columbus Ohio. Ohio State University, 1940.

"Another contribution which an organization can make is that it may design and send out follow-up material for the broadcast. A problem arises here because of the necessity of financing the printing and mailing. Again the financial structure is one of co-operation in many cases." p. 140

"Mr. Fisher, of the CBS, spoke on 'The network's Responsibility in Educational Broadcasting.' He divided educational broadcasting into two phases, adult education and classroom education. In speaking first on classroom education, he briefly outlined the jist of the American School of the Air, pointing out that in the early broadcasts an attempt was made to tie in with curriculum needs. This was soon found to be impossible, due to the diversified curriculums across the United States-and so the directors of the American School of the Air, had to reevaluate network responsibility in classroom broadcasting. He also pointed out that the American School of the Air was a pioneer attempt and in building up an audience it had to take into account three problems: schedule adjustment across the country, teacher education, and equipment. As the promotion of the American School of the Air proceeded some solution was found to all these points. Mr. Fisher then undertook to outline a modern view regarding the network responsibility to classroom broadcasting. He indicated first that the audience listening to the broadcasts of the American School of the Air was considerable, as indicated by the number of teachers manuals distributed and by cross section surveys. With a large number of schools in the United States using these programs an attempt was made by the program-planners to avoid duplication of local broadcasts to schools. This resulted in the philosophy that a school broadcast of a network should attempt to supplement and enrich classroom instruction rather than attempt to provide specific programs which could not by any stretch of the imagination, tie

up with all local courses of study. This supplementing of classroom instruction is done by utilizing all of the resources of a great network--resources which include facilities for international broadcasts, and the tapping of great reservoirs, and the employment of great minds which are not usually available to local broadcasts."

Tyson, Levering, and Josephine MacLatchy, (edited by) "Education on the Air" and "Radio and Education," Proceedings National Advisory Council. Chicago: University Press. 1935.

Lectures and discussions on suitable radio programs for children and adults of all types and abilities. Especially considered were the educational broadcasts of various types.
Problems which arise as to cost, accuracy, and popularity were discussed.
How to manage such programs in the future were also foremost in consideration. Little help for classroom teacher seeking not how to create, but to use those programs which are created.

_____, Information Series No. 1, National Advisory Council on Radio in Education, Inc., 1936.

Explanatory booklet on organization, officers origin, and functioning of the National Advisory Council on Radio in Education.

_____, Radio in Education, Chicago: University of Chicago Press. 1935.

Records of proceedings-assembly of the council-situations then existing-the whole education problem. Little about school broadcasts. Some about what has been tried, but not how.

_____, What to Read about Radio, (mimeographed) An annotated bibliography. 1933. 30 pp.

_____, "Education Tunes In," United States Bureau of Education Bulletin No. 20 Vol. I, Washington, D. C.: United States Department of Interior. Government Printing Office. 1931.

Chapter VIII pp. 619-641. An interesting lecture on radio origin and the very instructive hobby of amateurs with their accounts of successes which have been proven

to help in times of great need.

Willis, Frederick Arthur, "Widening Horizons," Information Series No. 11, New York: National Advisory Council on Radio in Education, Inc., 1934.

Enlightenment on the advantage of broadcasts in addition to newspapers and an appeal to the public to keep them clear of propaganda of any didactic material and wrong method.

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[1]Johnson, Helen, compiler, The American School of the Air-Teacher's Manual and Classroom Guide. New York: Columbia Broadcasting System, Inc., 1932. 79 pp.

_____, The American School of the Air-Teacher's Manual and Classroom Guide. New York: Columbia Broadcasting System, Inc., 1934. 65 pp.

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_____, The American School of the Air-Teacher's Manual and Classroom Guide. New York: Columbia Broadcasting System, Inc., 1936. 43 pp.

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Fisher, Sterling, compiler, The American School of the Air-Teacher's Manual and Classroom Guide. New York: Columbia Broadcasting System, Inc., 1938. 78 pp.

_____, The American School of the Air-Teacher's Manual and Classroom Guide. New York: Columbia Broadcasting System, Inc., 1939. 84 pp.

[1]Ayers, Stuart, editor, The American School of the Air-Teacher's Manual and Classroom Guide. New York: Columbia Broadcasting System, Inc., 1940. 96 pp.

[2]_____, School of the Air of the Americas-Teacher's Manual. New York: Columbia Broadcasting System, Inc., 1941. 126 pp.